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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

02/21/2003

Howard M. Ellis
Simpson, Simpson & Snyder, PLLC
5555 Main Street
Williamsville, NY 14221

EXAMINER

LE, HOA VAN

ART UNIT

CLASS-SUBCLASS

1752

430-466000

DATE MAILED: 02/21/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,923	02/05/2002	Laszlo Papai	TCP:104 US	9881

TITLE OF INVENTION: STABILIZED CD-4 ONE-PART FILM DEVELOPER CONCENTRATES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1300	\$300	\$1600	05/21/2003

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Box ISSUE FEE
Commissioner for Patents
Washington, D.C. 20231
Fax (703)746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 02/21/2003

Howard M. Ellis
Simpson, Simpson & Snyder, PLLC
5555 Main Street
Williamsville, NY 14221

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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nonprovisional	NO	\$1300	\$300	\$1600	05/21/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
LE, HOA VAN	1752	430-466000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
☐ Publication Fee
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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10/071,923	02/05/2002	Laszlo Papai	TCP:104 US	9881
7590	02/21/2003		EXAMINER	
Howard M. Ellis Simpson, Simpson & Snyder, PLLC 5555 Main Street Williamsville, NY 14221			LE, HOA VAN	
			ART UNIT	PAPER NUMBER
			1752	
DATE MAILED: 02/21/2003				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The patent term adjustment to date is 0 days. If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the term adjustment will be 0 days.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)

Any questions regarding the patent term extension or adjustment determination should be directed to the Office of Patent Legal Administration at (703)305-1383.



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7590	02/21/2003		EXAMINER	
Howard M. Ellis Simpson, Simpson & Snyder, PLLC 5555 Main Street Williamsville, NY 14221 UNITED STATES			LE, HOA VAN	
			ART UNIT	PAPER NUMBER
			1752	
DATE MAILED: 02/21/2003				

Notice of Fee Increase on January 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after January 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on January 1, 2003. See Revision of Patent and Trademark Fees for Fiscal Year 2003; Final Rule, 67 Fed. Reg. 70847, 70849 (November 27, 2002).

The current fee schedule is accessible from: <http://www.uspto.gov/main/howtofees.htm>.

If the issue fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due," but not the correct amount in view of the fee increase, a "Notice to Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice to Pay Balance of Issue Fee," if the response to the Notice of Allowance and Fee(s) due form is to be filed on or after January 1, 2003 (or mailed with a certificate of mailing on or after January 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability

Application No.

10/071,923

Examiner

Hoa V. Le

Applicant(s)

PAPAI, LASZLO

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06 February 2003.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.
5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>2&4</u> . | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Hoa V. Le
Primary Examiner
Art Unit: 1752

This is in response to Papers filed on 06 February 2003.

I. Applicant adds new claims but fails to provide a convincing support by clearly point out page and line from the specification as originally filed. If new matter is found, please the authority stated in *Tronzo v. Biomet Inc.*, 41 USPQ2d1403.

II. Applicant elects the invention of Group I, material claims 1-11 and newly added claims 16-19 with traverse being acknowledged. The record shows that applicant could not be able to show or provide an evidence to the contrary as clearly pointed out and stated on the record. Accordingly, the language "with traverse" alone has and is given a little to no value and is properly treated as ---without traverse---.

III. In view of applicant's arguments the election of species requirement is withdrawn.

IV. (1) It is allowed to claim by a functional, characteristic or chemical property of a material (In re Swinehart, 169 USPQ 226). (2) However, a claimed functional, characteristic or chemical property of a material carries with a risk (In re Swinehart, 169 USPQ 228). Therefore, one should be carefully looked into it for his own benefit. Please also see In re Schreiber, 44 USPQ2d 1432 since it is reasonable that the Office is not supplied, provided or equipped with a sufficient facility to carry out a test for the functional or characteristic properties as claimed in accordance with the authority stated in In re Best, 195 USPQ 430; Ex parte Maizel, 27 USPQ2d 1662 or Ex parte Phillip, 28 USPQ2d 1302. For examples, the language "a sufficient

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amount...extent the shelf-like” or “further characterized...developer performance” or the like has been considered as a functional, characteristic and chemical property of a material.

V. Applicants’ prior art submissions filed on 07 June 2002 and 06 February 2003 have been considered.

VI. The following is an examiner's statement of reasons for allowance:

(1) The language “concentrated” solution is and has been considered and searched as many times more concentrate than a ready-to-use solution developer, such as at least three times more concentrate than that of a ready-to-use one.

(2) Hashimoto et al (5,891,608) disclose, teach, suggest, demonstrate and reduce to practice with a one-part liquid concentrate color developer replenisher and ready-to-use developer comprising from about 4 to about 65 mmol/l of 2-methyl-4-[N-ethyl-N-(beta-hydroxyethyl)amino]aniline or its salt and from about 0.005 to about 0.5 mol/l of compound H-7 (N, N-bis(2-sulfoethyl) hydroxylamine. Please see the whole disclosure of the applied reference, especially at col.19:22, 32-41, compound H-7, 21:39-43 and 55:63 to 57:35.

(3) The elected main invention of claim 1 is let to be issued since it is reasonable that the Office does not do any test for the claimed functional, characteristic and chemical properties as clearly pointed out and set forth in paragraph “IV” about until some one could be able to show that the claimed functional, characteristic and chemical properties are within the use of from about 4 to about 65 mmol/l of 2-methyl-4-[N-ethyl-N-(beta-hydroxyethyl)amino]aniline or its salt and from about 0.005 to about 0.5 mol/l of compound H-7 (N, N-bis(2-sulfoethyl) hydroxylamine as disclosed, taught, suggested, demonstrated and

reduced to practice from Hashimoto et al on the record.

(4) In a contest applicant must be established their invention by providing the convincing tests for the minimum and maximum amounts in g/l or mol/l for each of the requisite chemical ingredients in the claims in accordance with the claimed functional, characteristic and chemical properties at the time the invention was made but not at any time after because it is considered as a supposition. Otherwise, the claimed functional, characteristic and chemical properties has and are given no value. Any amount in g/l or mol/l must be distinct and non-obvious from those in Hashimoto et al on the record. Otherwise, the claims are not patentable over Hashimoto et al on the record.

(5) The supplemental secondary material claims 2-11 and 16-19 are permitted to be rejoined with the main invention of the material claim 1. The method claims 12-15 are permitted to be rejoined with the main invention of the material claim 1 as set forth on the record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

VII. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa V. Le whose telephone number is 703-308-2295. The examiner can normally be reached on 6:30AM-5:00PM, M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the

Art Unit: 1752

organization where this application or proceeding is assigned are 703-746-7172 for regular communications and 703-746-7172 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Hoa V. Le
Primary Examiner
Art Unit 1752

HVL
20 February 2003

HOA VAN LE
PRIMARY EXAMINER

A handwritten signature in black ink that reads "Hoa Van Le". The signature is written in a cursive, flowing style.

FULL TEXT OF CASES (USPQ2D)

All Other Cases

In re Schreiber (CA FC) 44 USPQ2d 1429 (10/23/1997)

In re Schreiber (CA FC) 44 USPQ2d 1429

In re Schreiber

U.S. Court of Appeals Federal Circuit

44 USPQ2d 1429

Decided October 23, 1997

No. 97-1201

Headnotes

PATENTS

1. Patentability/Validity -- Anticipation -- Identity of elements (§ 115.0704)

Prior art patent disclosing conical spout for open-ended containers, which contains all structural limitations recited in application claims for conical dispensing top for popped popcorn, anticipates application claims even though it does not address use of disclosed structure to dispense popcorn, since recitation of new intended use for old product does not make claim to that old product patentable, and since applicant's contention that claimed structure will be used to dispense popcorn thus does not have patentable weight if structure is already known, regardless of whether it has ever been used in any way in connection with popcorn.

2. Patentability/Validity -- Anticipation -- Prior art (§ 115.0703)

Question whether reference is analogous art is irrelevant to whether that reference anticipates claimed invention; reference may be from entirely different field of endeavor from that of claimed invention or may be directed to entirely different problem from that addressed by inventor, yet reference will still anticipate if it explicitly or inherently discloses every limitation recited in claims.

3. Patentability/Validity -- Anticipation -- Identity of elements (§ 115.0704)

Examiner correctly found that functional limitations of application claim for conical dispensing top for popped popcorn were inherent in prior art conical spout for open-ended containers, and that functional limitations thus did not give claim patentable weight, since embodiment according to prior patent and embodiment depicted in figure in application have same general shape; examiner therefore correctly

found that prior patent established prima facie case of anticipation.

4. Patentability/Validity -- Anticipation -- Identity of elements (§ 115.0704)

Applicant failed to overcome prima facie case of anticipation by showing that prior art conical spout for open-ended containers did not inherently possess functionally defined limitations in application claim for conical dispensing top for popped popcorn, since applicant's declaration, which asserted that conical top built according to figure in prior patent was too small to jam and dispense popcorn as recited in claim, does not specify dimensions of either dispensing top tested or popcorn used, since Board of Patent Appeals and Interferences found as factual matter that scaled-up version of top disclosed in prior patent would be capable of performing all functions recited in application claim, and since disclosure of prior patent is much broader than precise conical shape shown in patent's figure.

Case History and Disposition:

Page 1429

Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Stephen B. Schreiber (device for dispensing popped popcorn). From decision sustaining examiner's final rejection of four claims in application, applicant appeals. Affirmed; Newman, J., dissenting in separate opinion.

Attorneys:

Joseph B. Taphorn, Poughkeepsie, N.Y., for appellant.

Joseph G. Piccolo, associate solicitor, Nancy J. Linck, solicitor, Albin F. Drost, deputy solicitor, and Karen A. Buchanan, associate solicitor, Patent and Trademark Office, Department of Commerce, for appellee.

Judge:

Before Newman, Plager, and Bryson, circuit judges.

Opinion Text

Opinion By:

Bryson, J.

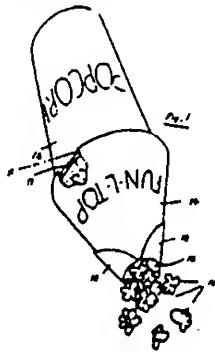
Stephen B. Schreiber appeals the decision of the United States Patent and Trademark Office's Board of Patent Appeals and Interferences sustaining a final rejection of four claims of Schreiber's patent application. We affirm.

I

Schreiber's patent application claims a device for dispensing popped popcorn. The device is conically shaped with a large opening that fits on a container and a smaller

Page 1430

opening at the opposite end that allows popped popcorn to pass through when the device is attached to a popcorn container and turned upside down. An embodiment disclosed in Schreiber's patent application is depicted below.



Schreiber filed a number of claims, and the examiner allowed many of the claims. Claims 1, 2, 14, and 15 were finally rejected, however, and those claims are the subjects of this appeal. Claim 1 recites:

A dispensing top for passing only several kernels of a popped popcorn at a time from an open-ended container filled with popped popcorn, having a generally conical shape and an opening at each end, the opening at the reduced end allows several kernels of popped popcorn to pass through at the same time, and means at the enlarged end of the top to embrace the open end of the container, the taper of the top being uniform and such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container. Claim 2 is similar to claim 1 but additionally recites that the top comprises a "means at the reduced end of the top to close-off the opening thereat." The other two claims, claims 14 and 15, depend from claims 1 and 2, respectively. Schreiber does not argue that claims 14 and 15 are patentable if claims 1 and 2 are not. Accordingly, because we affirm the rejection of claims 1 and 2, we need not address claims 14 and 15.

Claim 1 was rejected by the examiner under 35 U.S.C. Section 102(b) as being anticipated by Swiss Patent No. 172,689 to Harz. The Harz patent discloses "a spout for nozzle-ready canisters," which may be tapered inward in a conical fashion, and it states that the spout is useful for purposes such as dispensing oil from an oil can. The examiner explained that Harz discloses a conical dispensing top for an open-ended container and concluded that "the Harz top is clearly capable of dispensing popped popcorn." Figure 5 from Harz is depicted below.



Claim 2 was rejected by the examiner under 35 U.S.C. Section 103 as being unpatentable over the combination of Harz and U.S. Patent No. 3,537,623 to Fisher. The examiner stated that although Harz does not disclose a "means at the reduced end of the top to close-off the opening thereat," Fisher does. The examiner concluded that it would have been obvious to one of ordinary skill in the art to modify Harz in view of Fisher in order to "seal [] the container contents from contaminates."

In response to the patent examiner's rejections, Schreiber submitted a declaration stating that the conical dispensing top depicted in figure 5 of Harz was incapable of "jam [ing] up the popped popcorn before the end of the cone and permit [ing] the dispensing of only a few kernels at a shake of a package when the top is mounted on the container." The examiner did not enter that declaration in the record because he believed it had not been properly submitted. When Schreiber appealed to the Board, the Board

remanded the case to the examiner to consider the declaration. On remand, the examiner considered the declaration but found that it did not provide sufficient information to support Schreiber's assertion that a dispensing top built according to Harz does not inherently possess the functionally defined limitations recited in the claims.

Schreiber again appealed to the Board, which upheld the rejections. The Board first found that Harz discloses every limitation recited in claim 1. Several of the recitations in the claims, the Board concluded, merely set forth the function and intended use of the top and therefore did not require any

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structural feature other than those taught by Harz. The Board found that the structure disclosed by Harz is inherently capable of dispensing popcorn in the manner set forth in the claims, and that Schreiber's declaration did not provide enough details to prove that the structure disclosed by Harz is incapable of performing the claimed functions of Schreiber's invention.

In response to Schreiber's argument that the conical dispensing top disclosed in Harz is designed to dispense liquids such as oil, rather than solid items such as popcorn, and that it is not large enough to pass popcorn kernels, the Board noted that the Harz patent referred to the use of the claimed device for lubricating oil only as an "example," and found that one of skill in the art "would perceive the top of Harz as being of broader application." The Board further found that the dispensing top disclosed in Harz "is of a relative size and has a taper which would inherently permit popped popcorn kernels to jam up before the end of the cone and permit the dispensing of only a few kernels at a shake of the package" when the top is mounted on a popped popcorn container. Accordingly, the Board concluded that "all the limitations of claim 1 are found in Harz, either expressly or under the principles of inherency, and this claim is clearly anticipated thereby."

As for claim 2, the Board found that Fisher disclosed a means for closing off the smaller end of a conically shaped top and further found that it would have been obvious to one of ordinary skill in the art to provide a close-off mechanism for a top of the sort disclosed by Harz, to prevent dirt and other contaminating matter from entering the opening in the device. Schreiber appeals both of the Board's determinations.

II

Schreiber first argues that Harz does not anticipate claim 1. To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently. See *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047, 34 USPQ2d 1565, 1567 (Fed. Cir. 1995). Anticipation is an issue of fact, see *In re Graves*, 69 F.3d 1147, 1141, 36 USPQ2d 1697, 1700 (Fed. Cir. 1995); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988), and the question whether a claim limitation is inherent in a prior art reference is a factual issue on which evidence may be introduced, see *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

There is no dispute that the structural limitations recited in Schreiber's application are all found in the Harz reference upon which the examiner and the Board relied. Thus, to use the terms found in Schreiber's claim 1, Harz discloses a "dispensing top" that has "a generally conical shape and an opening at each end," and "means at the enlarged end of the top to embrace the open end of the container, the taper of the top being uniform." Schreiber argues, however, that Harz does not disclose that such a structure can be used to dispense popcorn from an open-ended popcorn container.

[1] Although Schreiber is correct that Harz does not address the use of the disclosed structure to dispense popcorn, the absence of a disclosure relating to function does not defeat the Board's finding of anticipation. It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990) ("The discovery of a new property or use of a previously known composition, even

when that property and use are unobvious from prior art, can not impart patentability to claims to the known composition."); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 782, 227 USPO 773, 778 (Fed. Cir. 1985) (composition claim reciting a newly discovered property of an old alloy did not satisfy section 102 because the alloy itself was not new); *In re Pearson*, 494 F.2d 1399, 1403, 181 USPO 641, 644 (CCPA 1974) (intended use of an old composition does not render composition claim patentable); *In re Zierden*, 411 F.2d 1325, 1328, 162 USPO 102, 104 (CCPA 1969) (" [M]ere statement of a new use for an otherwise old or obvious composition cannot render a claim to the composition patentable."); *In re Sinex*, 309 F.2d 488, 492, 135 USPO 302, 305 (CCPA 1962) (statement of intended use in an apparatus claim failed to distinguish over the prior art apparatus); *In re Hack*, 245 F.2d 246, 248, 114 USPO 161, 162 (CCPA 1957) ("the grant of a patent on a composition or a machine cannot be predicated on a new use of that machine or composition"); *In re Benner*, 174 F.2d 938, 942, 82 USPO 49, 53 (CCPA 1949) ("no provision has been made in the patent statutes for granting a patent upon an old product based solely upon discovery of a new use for such product"). Accordingly, Schreiber's contention that his structure will be used to dispense popcorn does not have patentable weight if the structure is already known,

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regardless of whether it has ever been used in any way in connection with popcorn.

[2] Schreiber makes the closely related argument that Harz does not anticipate claim 1 because Harz is non-analogous art to which one of ordinary skill in the art would not have looked in addressing the problem of dispensing tops for popped popcorn containers. However, the question whether a reference is analogous art is irrelevant to whether that reference anticipates. See *In re Self*, 671 F.2d 1344, 1350, 213 USPO 1, 7 (CCPA 1982). A reference may be from an entirely different field of endeavor than that of the claimed invention or may be directed to an entirely different problem from the one addressed by the inventor, yet the reference will still anticipate if it explicitly or inherently discloses every limitation recited in the claims.

Schreiber further argues that the functional limitations of his claim distinguish it from Harz. In particular, Schreiber points to the recitation that the claimed top "allows several kernels of popped popcorn to pass through at the same time," and that the taper of the top is such "as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container."

A patent applicant is free to recite features of an apparatus either structurally or functionally. See *In re Swinehart*, 439 F.2d 210, 212, 169 USPO 226, 228 (CCPA 1971) (" [T]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims."). Yet, choosing to define an element functionally, i.e., by what it does, carries with it a risk. As our predecessor court stated in *Swinehart*, 439 F.2d at 213, 169 USPO at 228:

where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

See also *In re Hallman*, 655 F.2d 212, 215, 210 USPO 609, 611 (CCPA 1981); *In re Ludtke*, 441 F.2d 660, 663-64, 169 USPO 563, 565-67 (CCPA 1971).

[3] The examiner and the Board both addressed the question whether the functional limitations of Schreiber's claim gave it patentable weight and concluded that they did not, because those limitations were found to be inherent in the Harz prior art reference. To begin with, contrary to the characterization in the dissent, nothing in Schreiber's claim suggests that Schreiber's container is "of a different shape" than Harz's. In fact, as shown above, an embodiment according to Harz (Fig. 5) and the embodiment depicted in figure 1 of Schreiber's application have the same general shape. For that reason, the examiner was justified in concluding that the opening of a conically shaped top as disclosed by Harz is inherently

of a size sufficient to "allow [] several kernels of popped popcorn to pass through at the same time" and that the taper of Harz's conically shaped top is inherently of such a shape "as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container." The examiner therefore correctly found that Harz established a prima facie case of anticipation.

[4] At that point, the burden shifted to Schreiber to show that the prior art structure did not inherently possess the functionally defined limitations of his claimed apparatus. See *In re Spada*, 911 F.2d at 708, 15 USPQ2d at 1658; *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986); *In re Best*, 562 F.2d 1252, 1254-55, 195 USPQ 430, 433 (CCPA 1976). The Board found that Schreiber failed to do so, and we agree. Schreiber's declaration asserts that he built a conically shaped top according to figure 5 of Harz and that it was too small to jam and dispense popcorn as recited in the claim. The declaration, however, does not specify the dimensions of either the dispensing top that was tested or the popcorn that was used.

Moreover, the Board found as a factual matter that the top disclosed in figure 5 of the Harz patent "is capable of functioning to dispense kernels of popped popcorn in the manner set forth in claim 1." Starting with Schreiber's assumption that Harz should be limited to use as an attachment to an oil can, the Board scaled figure 5 to the proportions necessary to fit the Harz container on top of a standard one-quart oil can, as Schreiber suggested in his request for reconsideration. After scaling the Harz figure in that manner, the Board found that the Harz dispenser would be capable of dispensing popcorn in the manner set forth in claim 1 of Schreiber's application.

The dissenting opinion incorrectly states that the Board "us [ed] Mr. Schreiber's invention as a template" in determining that the Harz dispenser anticipates Schreiber's invention. In fact, the Board simply scaled the dispenser illustrated in Harz figure 5 up

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to the size necessary to fit a standard oil can, without changing the proportions of the figure in any way. (The top depicted in figure 5 of the Harz patent was obviously not intended to be a full-sized representation of the Harz invention, any more than the top depicted in figure 1 of Schreiber's application was intended to be a full-sized representation of his invention.) The portion of the dissenting opinion addressed to this point is therefore based on a false premise B that the prior art device was "altered by the Board and then found to anticipate a different invention in whose image it was recreated." The Board's finding that the scaled-up version of figure 5 of Harz would be capable of performing all of the functions recited in Schreiber's claim 1 is a factual finding, which has not been shown to be clearly erroneous. On this ground alone, the Board's anticipation ruling must be upheld. In any event, however, it is not enough for Schreiber to contend that a top built according to the proportions of figure 5 of Harz is incapable of performing the jamming and dispensing functions. The figures from Harz were provided only as "design examples of the invention"; the disclosure of the Harz patent is thus much broader than the precise conical shape disclosed in figure 5. Moreover, contrary to Schreiber's suggestion, the structure disclosed in Harz is not limited to use as an oil can dispenser. While that use is given as the principal example of the uses to which the invention could be put, nothing in the Harz patent suggests that the invention is in any way limited to that use. In sum, Schreiber's declaration fails to show that Harz inherently lacks the functionally defined limitations recited in claim 1 of the application. Accordingly, we agree with the Board that Schreiber has failed to rebut the prima facie case of anticipation identified by the examiner. The Board's factual finding on the issue of anticipation is therefore affirmed.

III

Schreiber also challenges the Board's finding that claims 2 and 15 are unpatentable under 35 U.S.C. Section 103 as being obvious over the combination of Harz and Fisher. Schreiber argues that the

combination of Harz and Fisher does not disclose all the limitations of claim 2 because neither Harz nor Fisher discloses the functionally defined features of the top. That argument is without merit because, as we have already noted, Harz discloses those functionally defined limitations.

Schreiber also argues that Fisher does not provide the function that the "means for closing off" in Schreiber's application provides. The functions Schreiber cites B enabling a person to carry a popped-popcorn package in a non-upright position without spillage, keeping the popcorn warm, and facilitating the mixing of ingredients B are not recited as part of the means-plus-function clause in claim 2. Accordingly, those functions cannot impart patentability to the claim.

Schreiber further argues that Fisher is non-analogous art because Fisher relates to pouring oil from an oil can whereas Schreiber's invention relates to popcorn dispensing. That argument was not raised before the Board and we therefore decline to consider it for the first time on appeal. Even if we were to consider that argument, however, we note that Schreiber acknowledges in the specification that the prior art pertinent to his invention includes patents relating to dispensing fluids. Schreiber therefore may not now argue that such patents are non-analogous art. See *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1063 (Fed. Cir. 1988); *In re Fout*, 675 F.2d 297, 300, 213 USPQ 532, 535 (CCPA 1980); *In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979); *In re Nomiya*, 509 F.2d 566, 571, 84 USPQ 607, 611-12 (CCPA 1975). Accordingly, we find no error in the Board's determination that claims 2 and 15 would have been obvious. **AFFIRMED**. Newman, J., dissenting.

I respectfully dissent. The panel majority affirms the PTO position that the express limitations of the claims are irrelevant when dealing with a rejection on the ground of "anticipation." The court thus departs from the rules of claim interpretation on which we have placed so much weight. The Federal Circuit has held, over and over, that every claim limitation is important and none can be ignored -- and now proceeds to ignore several express limitations. Thus the panel incongruously holds that a claim that requires, explicitly and precisely, a container of popcorn and a dispenser that passes only a few kernels of popcorn before jamming, is "anticipated" by an oil can of a different shape as illustrated in a reference that neither shows nor suggests a container filled with popcorn or the jamming of the dispenser upon dispensing the popcorn. I feel for those who tread the arcane path of patent soliciting, for this court's insistence on the

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importance of the limitations in the claims seems to have lost its way.

A

Schreiber's claims 1 and 14 are representative:

1. A dispensing top for passing only several kernels of a popped popcorn at a time from an open-ended container filled with popped popcorn, having a generally conical shape and an opening at each end, the opening at the reduced end allows several kernels of popped popcorn to pass through at the same time, and means at the enlarged end of the top to embrace the open end of the container, the taper of the top being uniform and such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container.

14. A package consisting of a container having popped popcorn and having an open end and embracing thereat a dispensing top according to claim 1.

The Board held that it is irrelevant that the Schreiber claims are limited to a container filled with popped popcorn with the additional limitation of dispensing a few kernels at a time before the dispenser jams up. No popcorn container or dispenser was cited by the PTO, and no similar claim limitations were cited by the PTO. These claim limitations can not be ignored. See *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532, 3 USPQ2d 1321, 1324 (Fed. Cir. 1987) (the court can not ignore a plethora of meaningful limitations). Patentability is determined for the invention as claimed, with all its

limitations. It is improper to delete explicit limitations from the claim in order to find the residue in the prior art.

"That which infringes if later anticipates if earlier." *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1573, 229 USPQ 561, 574 (Fed. Cir. 1986) (citing *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889)). It is inconceivable that this or any court would find Mr. Schreiber's claims to this popcorn dispenser infringed by the oil can of the Harz reference. The claim limitations that the container is filled with popped popcorn and that only a few kernels of popcorn are released at a time could not be ignored in an infringement action, and they are not properly ignored in a patentability action.

The Board, using Mr. Schreiber's invention as a template, rescaled the prior art and filled the oil can with popcorn. This exercise of hindsight is not "anticipation." The law of anticipation requires that the same invention, with all the limitations of the claims, existed in the prior art. See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920-21 (Fed. Cir. 1989) ("anticipation" requires that the identical invention is described in a single prior art reference). A prior art device can not be altered by the Board and then found to anticipate a different invention in whose image it was recreated. In responding to the PTO's rejection, Mr. Schreiber made an actual conical top according to the Harz oil can's proportions, and reported that the popcorn did not behave as in his device. The Board then proposed that Mr. Schreiber had erred in determining the diameter of the opening, and postulated that with the appropriate opening the Harz oil can might behave as does Mr. Schreiber's container. Mr. Schreiber says this is incorrect. I say it is irrelevant. See, e.g., *Richardson*, 868 F.2d at 1236, 9 USPQ2d at 1920 (every element of the claim must be shown in the reference, including all limitations); *In re Paulsen*, 30 F.3d 1475 [31 USPQ2d 1671] (the reference must describe the claimed invention sufficiently to place it in the possession of a person of ordinary skill in the field).

Mr. Schreiber's popcorn dispenser is not described in the prior art. Statements in the claims that define and limit the device are material limitations, for purposes of infringement and for purposes of distinguishing from the prior art. See, e.g., *Rowe v. Dror*, 112 F.3d 473, 478-79, 42 USPQ2d 1550, 1553-54 (Fed. Cir. 1997) (the field of the invention as stated in a Jepson-type claim limits the invention); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677-78, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988) (limitations stated in the preamble limit the claimed invention); *In re Stencel*, 828 F.2d 751, 754-55, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987) (function stated in claim distinguishes from prior art). The rejection for lack of novelty is simply incorrect.

In *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 117 S. Ct. 1040 [41 USPQ2d 1865] (1997) the Court stressed the importance of claim limitations. The cases cited by the panel majority relate to the discovery of a new use of a known composition or device, and hold that the discovery of that use does not render patentable that which is already known. However, Schreiber's device is not known, but is new, and the claims are explicitly so limited. See *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1255-57, 9 USPQ2d 1962, 1965-66 (Fed. Cir. 1989) ("To read the claim in light of the specification indiscriminately to cover all

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types of optical fibers would be divorced from reality."); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540 [220 USPQ 303] or 842 F.2d 1275 [6 USPQ2d 1277] (anticipation can not be based on conjecture). The claimed popcorn dispenser having a novel structure and function, whereby the container is filled with popcorn and after a few kernels of popcorn are released the dispenser jams up, is not in the cited prior art. The explicit claim limitations must be considered in determination of anticipation, just as they would be considered in construing the claims for the purpose of determining infringement. They can not be ignored.

Since no prior art shows this device, it can not be "anticipated" as lacking novelty.

B

The panel majority suggests that it would be "inherent" to use the oil can as a popcorn dispenser. An inherent disclosure, to be invalidating as an "anticipation," is a disclosure that is necessarily contained in the prior art, and would be so recognized by a person of ordinary skill in that art. *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 USPQ2d 1746, 1749-50 (Fed. Cir. 1991).

"Inherency" charges the inventor with knowledge that would be known to the art, although not described. Inherency is not a matter of hindsight based on the applicant's disclosure: the missing claim elements must necessarily be present in the prior art.

The authority cited by the majority, relating to claiming a known composition or device based on discovery of a new use, is inapt. It is of course correct that the discovery of a new use of a known composition or device does not render that composition or device patentable per se. The reason, however, is not "inherency"; it is that the composition or device is already known to the public, and can not be removed from the public. (The new use can of course be claimed as a method of use.) In this case, however, Mr. Schreiber has created a new device, not previously known to the public, and has claimed his new device with explicit limitations that distinguish it from previously known devices.

In passing, I also observe that the majority errs in stating that advantages not recited in the claim can not impart patentability to a new device. The advantages of an invention are often relied on to support patentability; whether they are included in the claim depends on a variety of factors, and is not the subject of a rigid rule.

The issue in this case is anticipation; that is, novelty. Since the claimed invention is not described in a single prior art reference, it is not "anticipated."

- End of Case -

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FULL TEXT OF CASES (USPQ FIRST SERIES)

In re Swinehart and Sfiligoj, 169 USPQ 226 (CCPA 1971)

In re Swinehart and Sfiligoj

(CCPA)

169 USPQ 226

Decided Apr. 1, 1971

No. 8396

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Claims - Functional - In general (§ 20.451)

"Functional" indicates nothing more than fact that attempt is being made to define something by what it does rather than by what it is; there is nothing intrinsically wrong with use of such technique in drafting patent claims.

2. Claims - Functional - In general (§ 20.451)

Court sees no merit in any proposition which would require denial of claim solely because of type of language used to define subject matter for which patent protection is sought.

3. Claims - Functional - In general (§ 20.451)

Patentability - Subject matter for patent monopoly - Function (§ 51.603)

Concern over use of functional language at "point of novelty" stems largely from fear that applicant will attempt to distinguish over reference by emphasizing property or function not mentioned in reference and thereby assert that his claimed subject matter is novel; such a concern is irrelevant and misplaced; mere recitation of newly discovered function or property, inherently possessed by things in prior art, does not cause claim drawn to those things to distinguish over prior art; additionally, where Patent Office has reason to believe that functional limitation asserted to be critical for establishing novelty in claimed subject matter may, in fact, be an inherent characteristic of prior art, it possesses authority to require applicant to prove that subject matter shown to be in prior art does not possess characteristic relied on.

4. Claims - Functional - In general (§ 20.451)

There is no support, in holdings of prior cases or in statute, for proposition that "functional" language, in and of itself, renders claim improper; moreover, there is no court decision holding that there is some other ground for objecting to claim on basis of any language, "functional" or otherwise, beyond what is already sanctioned by 35 U.S.C. 112.

5. Claims - Broad or narrow - In general (§ 20.201)

Claims - Functional - In general (§ 20.451)

Claims - Indefinite - In general (§ 20.551)

Assuming that applicant is claiming what he regards as his invention, there are in reality only two basic grounds for rejecting claim under 35 U.S.C. 112; first is that language used is not precise and definite enough to provide clear-cut indication of scope of subject matter embraced by claim; this ground finds its basis in second paragraph of section 112; second is that language is so broad that it causes claim to have a potential scope of protection beyond that which is justified by specification disclosure; this ground stems from first paragraph of section 112; merits of "functional" language in claim must be tested in light of these two requirements alone.

6. Claims - Functional - In general (§ 20.451)

"Functional" terminology may render claim quite broad; by its own literal terms, claim employing such language covers any and all embodiments which perform recited function; legitimate concern often exists as to whether scope of protection defined thereby is warranted by scope of enablement indicated and provided by description contained in specification; this is not to say, however, that every claim containing "functional" terminology is broad, since, in many cases, it is obvious that only a very limited group of objects will fall within intended category.

Particular patents-Crystalline Materials

Swinehart and Sfiligoj, Crystalline Materials, claim 24 of application allowed

Case History and Disposition:

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Appeal from Board of Appeals of the Patent Office.

Application for patent of Carl F. Swinehart and Marko Sfiligoj, Serial No. 314,952, filed Oct. 9, 1963; Patent Office Group 165. From decision rejecting claim 24, applicants appeal. **Reversed, Lane, Judge, concurring with opinion; Almond, Judge, dissenting with opinion.**

Attorneys:

John P. Hazzard and James A. Lucas, Cleveland, Ohio, for appellant.

S. Wm. Cochran (Joseph F. Nakamura of counsel) for Commissioner of Patents.

Judge:

Before Rich, Almond, Baldwin, and Lane, Associate Judges, and Newman, Judge, United States Customs Court, sitting by designation.

Opinion Text

Opinion By:

Baldwin, Judge.

This appeal is from the decision of the Patent Office Board of Appeals, adhered to on reconsideration, which affirmed the rejection of claim 24 in appellants' application ¹as failing to meet the requirements of 35 U.S.C. 112. The board reversed the rejection of two other claims.

The Invention

The subject matter of the appealed claim is a composition of matter essentially made up of barium fluoride and calcium flouride in approximately eutectic proportions. The record indicates, and appellants confirm, that "[e]utectic compositions of barium fluoride and calcium fluoride are well known in the prior art." However, appellants are apparently the first to discover that when crystalline forms of these two components are melted together in eutectic proportion and then resolidified by "conventional crystal-growing techniques," there results a multi-phase crystalline body characterized by an intimate matrix of large, visible crystals, which, unlike the prior art materials, does not cleave, is resistant to thermal shock and impact and approaches maximum density for the overall composition. In addition, and allegedly unexpectedly, these crystalline bodies "are capable of transmitting collimated light," especially in the infrared wave range.

The appealed claim recites:

24. A new composition of matter, transparent to infra-red rays and resistant to thermal shock, the same being a solidified melt of two components present in proportion approximately eutectic, one of said components being BaF₂ and the other being CaF₂.

According to their brief, "[t]he exact point of novelty between appellants' claimed composition and that of the prior art is transparency." ²

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The Grounds for Rejection

The examiner rejected claim 24 "for failing to particularly point out and distinctly claim the invention as required in 35 U.S.C. 112." His asserted reasons were as follows:

Claim 24 is functional and fails to properly point out the invention. Applicants point out on page 2 of the specification, lines 24-27 that when the components are merely fused and cast as an integral body, said body is opaque. This claim in reciting "transparent to infrared rays" is thus improperly functional. * * * It should also be noted that this claim does not require more than one phase.

The board agreed, adding:

Claim 24 stands rejected as improperly functional in that it distinguishes over the unsatisfactory material of appellants' figure 3 merely in the functional term "transparent to infrared rays." We agree with the examiner in this respect, as transparency of the claimed material cannot be treated as an inherent, characteristic property, in view of the fact that the composition of appellants' Example V (figure 3) lacks this property, yet is made of the same materials as appellants' Example I. * * * This claim is not the type covered by a proper functional limitation pursuant to 35 U.S.C. 112, since the language in question does not define a means or a step, or a distinguishing ingredient.

Opinion

It is fairly safe to conclude from the language quoted above that the examiner and the board considered the use of functional language, per se, to render the instant claim indefinite. Appellants have apparently conceded that "functionality" is ordinarily equated with indefiniteness. They argue strenuously, however, that the disputed language here does not necessarily refer to a function of the recited composition or to a desired result but rather it defines a physical property. On the record produced in the Patent Office, therefore, it would appear that the single issue before us is whether the disputed language is in fact "functional". If this issue were determinative, appellants would fail since we have no doubt that such language is "functional" at least insofar as we interpret the meaning of that term. In any event, for reasons which will become clear as this opinion progresses, we find that issue to be not only *not* determinative of whether claim 24 satisfies the requirements of 35 U.S.C. 112 but also irrelevant in the analysis leading up to that determination.

[1] We take the characterization "functional", as used by the Patent Office and argued by the parties, to indicate nothing more than the fact that an attempt is being made to define something (in this case, a composition) by what it *does* rather than by what it *is* (as evidenced by specific structure or material, for example). In our view, there is nothing intrinsically wrong with the use of such a technique in drafting patent claims. ³Indeed we have even recognized in the past the practical *necessity* for the use of functional language. See, for example, *In re Halleck*, 57 CCPA 954, 421 F.2d 911, 164 USPQ 647 (1970). We recognize that prior cases have hinted at a possible distinction in this area depending on the criticality of the particular point at which such language might appear. ⁴Our study of these cases has satisfied us,

[3] however, that any concern over the use of functional language at the so-called "point of novelty" stems largely from the fear that an applicant will attempt to distinguish over a reference disclosure by emphasizing a property or function which may not be mentioned by the reference and thereby assert that his claimed subject matter is novel. Such

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a concern is not only irrelevant, it is misplaced. In the first place, it is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

[4] We are convinced that there is no support, either in the actual holdings of prior cases or in the statute, for the proposition, put forward here, that "functional" language, in and of itself, renders a claim improper. We have also found no prior decision of this or any other court which may be said to hold that there is some other ground for objecting to a claim on the basis of *any* language, "functional" or otherwise, beyond what is already sanctioned by the provisions of 35 U.S.C. 112. ⁵

[5] Assuming that an applicant is claiming what he regards as his invention, there are in reality only two basic grounds for rejecting a claim under § 112. The first is that the language used is not precise and definite enough to provide a clear-cut indication of the scope of subject matter embraced by the claim. This ground finds its basis in the second paragraph of section 112, the rationale for which was discussed by us recently in *In re Hammack*, 57 CCPA 1225, 427 F.2d 1378, 166 USPQ 204 (1970). The second is that the language is so broad that it causes the claim to have a potential scope of protection beyond that which is justified by the specification disclosure. Cf. *General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 37 USPQ 466 (1938). This ground of rejection is now recognized as stemming from the requirements of the first paragraph of 35 U.S.C. 112. See *In re Robins*, 57 CCPA 1321, 429 F.2d 452, 166 USPQ 552 (1970); *In re Borkowski*, 57 CCPA 946, 422 F.2d 904, 164 USPQ 642 (1970). Cf. *In re Halleck*, *supra*. The merits of the "functional" language in the claim before us must be tested in the light of these two requirements alone.

[6] "Functional" terminology may render a claim quite broad. By its own literal terms a claim employing such language covers *any and all* embodiments which perform the recited function. Legitimate concern often properly exists, therefore, as to whether the scope of protection defined thereby is warranted by the scope of enablement indicated and provided by the description contained in the specification. This is not to say, however, that every claim containing "functional" terminology is broad. Indeed, in many cases it will be obvious that only a very limited group of objects will fall within the intended category. Such appears to be the case here, since we do not sense any concern by the Patent Office that appellants are claiming more than they are entitled to claim under the first paragraph of section 112. We need not, therefore, consider whether there are any problems with the appealed claim arising under that paragraph. It is clear that the arguments of the parties are concerned solely with whether the disputed language serves to define the subject matter for which protection is sought with the distinctness and particularity which are required by the second paragraph of section 112.

In the brief for the Patent Office, it has been asserted for the first time that

the limits of appellant's invention clearly are not fixed by the expression "transparent to infrared rays." The expression is not defined, and in fact does not appear, in appellant's written description of their invention.

The solicitor points out that, in their specification, appellants demonstrate the novel aspect of their invention by setting out three charts depicting the percentage (as a function of wavelength) of infrared radiation transmitted through a 5mm thick "window" made from a eutectic composition of the components recited in the claim. One chart indicates that a fused and cast mixture of the two components transmits "substantially zero" collimated light in the infrared range. The other two charts indicate that when the fused mixture is "grown to form a crystal ingot", windows made therefrom transmit up to approximately 80% of infrared radiation depending on the particular wavelength of the

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radiation. What those charts also appear to indicate, however, is that the conditions used in preparing the product may affect to some extent both the percentage transmission and the band of wavelength transmitted. The solicitor argues that "transparency is a matter of degree" and complains that because the "less favorable conditions" which produce a less effective product are not specifically disclosed in the specification

one would not know whether a product is "transparent to infrared rays", and therefore would infringe the claims, if the product transmits less infrared than is shown in Fig. 2.

Accepting the solicitor's argument as an attack on the definiteness of the disputed language in the claim before us, we must nevertheless disagree that the claim is rendered indefinite by that language. The record before us establishes that prior art compositions are substantially opaque to infrared rays. Appellants have produced a composition which is substantially transparent to such rays. Such a composition is conceded to be novel. It is true that the figures reproduced in the specification indicate that the degree of transparency varies depending on such factors as the conditions employed in producing the crystal, the thickness of the crystal and the particular wave length of the radiation transmitted. However, in all cases a *substantial* amount of infrared radiation is transmitted. We do not read appellants' disclosure as suggesting that only certain *degrees* of transparency to infrared are comprehended within the teaching there given. It follows that when appellants' claim is read in light of that disclosure the limits it purports to define are made sufficiently clear.

The decision of the board is *reversed*.

Footnotes

Footnote 1. Serial No. 314,952, filed October 9, 1963, for "Crystalline Materials."

Footnote 2. We observe that the term "transparent", as indicated by its primary dictionary definition of "having the property of transmitting light without appreciable scattering so that bodies lying beyond are entirely visible," generally is taken to refer to those light waves which are visible to the human eye. The parties here seem to agree that in the claim before us the term is used in its less common sense of being "pervious to any specified form of radiation." Clearly the most important defining characteristic of the word, which is the same in either sense, is that the light is transmitted "without appreciable scattering." Ref: Webster's Third New International Dictionary (G & C Merriam Co., 1969).

Footnote 3. We think our views herein are in accord with those of Congress as indicated by the language of the third paragraph of 35 U.S.C. 112. Note also the discussion and authorities cited on this point in *In re Fuetterer*, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963).

Footnote 4. [2] The solicitor, it appears, would also treat the question of *what* is being defined as important. He distinguishes a case relied on by appellants as "irrelevant" since the functional term there permitted dealt with novel proportions in a composition whereas here the question is "whether novelty in structure can be precisely defined in wholly functional terms." Nevertheless, we are unable to see merit in any proposition which would require the denial of a claim *solely* because of the *type* of language used to define the subject matter for which patent protection is sought. Insofar as the opinion in *In re Fisher*, 50 CCPA 1025, 307 F.2d 948, 135 USPQ 22 (1962), cited and relied on by the Patent Office here is inconsistent with the above statement, it will no longer be followed. Any doubt whether claims containing language such as that used in the *Fisher* case would be patentable was laid to rest last term when this court reversed the Patent Office position when the *Fisher* application came before us for a second time. See *In re Fisher*, 57 CCPA 1099, 427 F.2d 833, 166 USPQ 18 (1970).

Footnote 5. Compare the following language quoted from the opinion in *Locklin v. Switzer Bros., Inc.*, 125 USPQ 515, 519 (N.D. Cal., 1959), *aff'd* 299 F.2d 160, 131 USPQ 294 (9th Cir. 1961):

Plaintiffs cite a multitude of cases in support of the argument that this functional expression invalidates the claims. But, none of these cases holds that claims employing functional expressions to define the claimed invention are per se invalid. In all of the cases relied upon by Plaintiff the claims were disapproved because under the particular circumstances the use of functional expressions either left the description of the invention too vague or made the claim broader than the invention.

Concurring Opinion Text

Concur By:

Lane, Judge, concurring.

I concur in the result reached by the principal opinion. While I do not necessarily disagree with the conclusions about functionality stated therein, I find it unnecessary in this case to make such conclusions.

Taking the language of the third paragraph of section 112 as a definition of the type of "functional" expressions which have long been troublesome in patent law, I find that such expressions are those which recite "a means or step for performing a specified function without the recital of structure, material, or acts in support thereof." An example of what is meant by "a specified function" is found in the Supreme Court's opinion in *General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 37 USPQ 466 (1938). In that case, offsetting and sagging of filaments in incandescent lamps had long been a problem in the art. The specification there described how to remedy those problems by regulating the size and shape of the grains of material making up the filaments. The claims contained the following expression, which was relied upon for novelty: "grains of such size and contour as to prevent substantial sagging and off-setting during a normal or commercially useful life for such a lamp." *Id.* at 368, 37 USPQ at 468. The court stated:

"A limited use of terms of effect or result, which accurately define the essential qualities of a product to one skilled in the art, may in some instances be permissible and even desirable, but a characteristic essential to novelty may not be distinguished from the old art solely by its tendency to remedy the problems in the art met by the patent.

Id. at 371, 37 USPQ at 469. The court thus held, under the patent law then in effect, that certain kinds of functional expressions were impermissible at the point of novelty, specifically, those wherein the recited function is merely the solution of a problem in the art.

It cannot be the law that all functional terms are condemned when used to distinguish a claimed invention from the prior art. If this is the law, and it is carried to its logical conclusion, many nouns and adjectives would be condemned as functional, since they define in terms of use or effect. For example, a "door" is something used to close and open a passageway; a "nail" is an object used to hold two pieces of material together; a "black" material is one incapable of reflecting visible light. It is apparent to me that if functionality at the point of novelty is ever per se a ground for rejecting claims, it is not always so.

The kind of function recited in the product claim before us-transparent to infrared rays-is a physical characteristic of the composition of matter claimed. Moreover, no one has suggested a more distinct way of defining that composition, although it has been argued that the degree of transparency might be more precisely defined. I conclude that the recitation here is not the kind of claim functionality condemned by earlier cases but that it is a kind which is permitted.

It is true that all expressions in claims, functional or otherwise, must be definite in order to satisfy the second paragraph of 35 U.S.C. 112. I am in agreement with the

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principal opinion that the expression here in issue is reasonably definite.

Dissenting Opinion Text

Dissent By:

Almond, Judge, dissenting.

I agree with everything in the majority opinion except the conclusion that appellants' use of the phrase "transparent to infra-red rays" in claim 34 does not make the claim indefinite. The majority apparently would define "transparent" as "substantially transparent" or as transmitting "a *substantial* amount of infrared radiation." This is necessary since accepting a dictionary definition such as "transmitting light" or "opposed to opaque" would raise the question of what there is in the mere word "transparent" to distinguish the claim from the prior art compositions which appellants have characterized as being only "substantially" opaque (indicating that some light may be transmitted).

Even reading the limitation "substantially transparent" into the claim, which is of questionable propriety since a claim should be given the broadest interpretation reasonable during prosecution (see *In re Prater*, 56 CCPA 1381, 415 F.2d 1393, 162 USPQ 541 (1969), does not in my opinion make the claim definite. When does a eutectic composition stop being "substantially opaque" and become "substantially transparent"? The mere fact that there is no definite answer to this question means to me that the claim is indefinite. The second paragraph of 35 U.S.C. 112 requires that the claim point out the invention with more particularity than was done here, and this is especially significant since "the exact point of novelty between appellants' claimed composition and that of the prior art is transparency." Since no clear metes and bounds have been set forth, it appears to me that the solicitor was right in stating that:

* * * the lower limits of the claimed product are not fixed as to percent transmission and band of wavelengths transmitted, and one would not know whether a product is "transparent to infrared rays", and therefore would infringe the claims, if the product transmits less infrared than is shown in Fig. 2.

I would, therefore, affirm the decision of the board.

- End of Case -

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